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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,745	08/28/2003	Jyunichi Nakamura	060914-0117-US	5720
9629	7590	12/09/2004	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			WILLIAMS, ALEXANDER O	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/649,745

Applicant(s)

NAKAMURA ET AL.

Examiner

Alexander O Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,5-8 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 and 15-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 12-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☒ Certified copies of the priority documents have been received in Application No. 10/281,163.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/28/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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Serial Number: 10/649745 Attorney's Docket #: 060914-117-US

Filing Date: 8/28/2003; claimed foreign priority to 10/31/2001

Applicant: Nakamura et al.

Examiner: Alexander Williams

This application is a divisional application of serial # 10/281163, filed 10/28/02.  
This application is now U.S. Patent # 6,759,739.

Applicant's Pre-Amendment filed 8/28/03 has been acknowledged.

Applicant's election without traverse of the species of figures 1, 2 and 8 (claims 1, 12, 13, 14 and 15), filed 9/22/04, has been acknowledged. However, claim 15 depends from a nonelected claim 5 and will not be examined. Claims 1 and 12-14 will be examined.

This application contains claims 5, 6, 7, 8, 15 and 16 to 21 drawn to an invention non-elected without traverse.

Claims 2-4 and 9-11 have been canceled.

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 10/31/2001. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The disclosure is objected to because of the following informalities: The divisional application status information should be updated.

Appropriate correction is required.

Note: Claim one should end with a period --.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 12 to 14 are rejected under 35 U.S.C. § 102(e) as being anticipated by Mutsukawa et al. (Japan Patent Application # 2000-323613).

1. Mutsukawa et al. (figures 1 to 17f) specifically figure 1 show a multilayered substrate **10** for a semiconductor device, comprising: a multilayered substrate body formed of a

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plurality of conductor layers **12** and insulation layers **14**, and having a face for mounting a semiconductor element **16** thereon and another face for external connection terminals **22**, the face for mounting a semiconductor element with comprising pads **20a** through which the substrate is connected to the semiconductor element to be mounted thereon, and the face for external connection terminals comprising pads **24** through which the substrate is connected to an external electrical circuit (**through 22**), wherein a reinforcing sheet **26** is respectively joined to the face for mounting a semiconductor element thereon and the face for external connection terminals of the multilayered substrate body.

13. The multilayered substrate for a semiconductor device of claim 1, Mutsukawa et al. show wherein the pads **20a** provided at the face for mounting a semiconductor element thereon are in the form of bump **18** so that the tip of the pad protrudes from the face for mounting a semiconductor element of the multilayered substrate body.

14. The multilayered substrate for a semiconductor device of claim 1, Mutsukawa et al. show wherein the reinforcing sheet **26** joined to the face for external connection terminals **22** has through holes corresponding to the respective pads **24** for the external connection terminals, and the pads **20a** provided at the face for mounting a semiconductor element **16** thereon are in the form of bump **18** so that the tip of the pad **20a** protrudes from the face for mounting a semiconductor element of the multilayered substrate body.

Initially, and with respect to claim 12, note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); In re Fitzgerald, 205 USPQ 594, 596 (CCPA); In re Marosi et al., 218 USPQ 289 (CAFC); and most recently, In re Thorpe et al., 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that Applicant has burden of proof in such cases as the above case law makes clear.

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Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mutsukawa et al. (Japan Patent Application # 2000-323613).

12. The multilayered substrate for a semiconductor device of claim 1, Mutsukawa et al. show wherein the reinforcing sheet **26** joined to the face for mounting a semiconductor element **16** thereon is in the form of a frame **17** made of a metal, and the frame is formed by etching a metal sheet on which the multilayered substrate body is formed so as to remove only the metal material in the region where a semiconductor element is to be mounted.

As to the grounds of rejection under section 103, see MPEP § 2113.

The listed references are cited as of interest to this application, but not applied at this time.

Field of Search	Date
U.S. Class and subclass: 257/700,701,758,790,698,704,707,710,680,774,712,7137 20,787,788,737,738,717	12/3/04
Other Documentation: foreign patents and literature in 257/700,701,758,790,698,704,707,710,680,774,712,7137 20,787,788,737,738,717	12/3/04
Electronic data base(s): U.S. Patents EAST	12/3/04

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander O Williams whose telephone number is (571) 272 1924. The examiner can normally be reached on M-F 6:30 AM -7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272 1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alexander O Williams  
Primary Examiner  
Art Unit 2826

AOW  
12/3/04